

REMARKS

Claims 5,6,12,13,17, and 18 were rejected under 35 USC 112, second paragraph. Claims 1-7 were objected to under 37 CFR 1.75 as being a substantial duplicate of claims 8-13. Claims 1-16 were rejected under 35 USC 102(e) as being anticipated by Ayres et al (US 6,404,333). Claims 15-18 were rejected under 35 USC 102(e) as being anticipated by Deline et al (US 6,172,613).

Claims 5,6,12,13,17, and 18 rejected under 35 USC 112, second paragraph

Claims 5,6,12,13,17, and 18 were rejected under 35 USC 112, second paragraph for failing to particularly point out and distinctly claim the subject matter at hand. Specifically, the Examiner objected to the use of the material designation "ABS" without sufficient antecedent basis laid within the specification. Page 5, line 22-24 specifically refer to ABS as a material. Those skilled in the art recognize ABS as being acrylonitrile-butadiene-styrene. The Applicant has respectfully amended the specification and claims to refer to this material by its chemical name as opposed to its more common vernacular. Therefore, the Applicant respectfully requests reconsideration of the claims of the present invention in light of these amendments.

Claims 1-7 objected to under 37 CFR 1.75

Claims 1-7 were objected to under 37 CFR 1.75 as being a substantial duplicate of claims 8-13. Due to amendments altering the language of claims 1-7 in order to remove any product-by-process language, claims 8-13 were canceled to simplify prosecution. The Applicant, therefore, submits that any duplication of claims issues are presently moot.

Claims 1-16 were rejected under 35 USC 102(e)

Claims 1-16 were rejected under 35 USC 102(e) as being anticipated by Ayres et al (US 6,404,333). The office action asserts that Ayres discloses an instrument cluster comprising a back plate; a mask; the mask and back plate formed as a single component; an appliqué; a lens; a clear polycarbonate dial; and light emitting diode backlighting.

The Applicant respectfully traverses the Examiner's rejections and requests reconsideration based upon the attached amendments. The Applicant respectfully notes that the

only reference to a mask (as claimed by the present invention as a mask 112 molded integrally with the backplate 110) is referenced as a hood 44 in column 4, lines 59-64 of the Ayres reference. This reference, however, is specifically referenced as snapping in place rather than molded into a single component as claimed by the present invention. Furthermore, no reference is made within the Ayres reference to an injected-molded dial being molded directly onto the injected molded backplate as claimed by the present invention. The present invention has two structural points of novelty over the Ayres reference. The first is that the dial is molded directly onto the backplate (note limits the structural attachment of the dial to the backplate). The second is that the mask is molded as one piece with the backplate. It is precisely the combination of these two limitations that make the present invention novel over Ayres. Without the one piece molded backplate and mask (not taught by Ayres), attempts to mold a dial directly onto the backplate was known to cause warpage. The Applicant, therefore, asserts that the present invention has novel limitations not taught by Ayres and therefore after reconsideration should be found allowable.

Claims 15-18 were rejected under 35 USC 102(e)

Claims 15-18 were rejected under 35 USC 102(e) as being anticipated by Deline et al (US 6,172,613). The office action asserts that Deline discloses the method of producing an instrument cluster claimed by the present invention and cites columns 10 and 16, lines 16-25 and 5-17 respectively.

The Applicant respectfully traverses the Examiner's rejections and requests reconsideration in light of the aforementioned amendments. The Applicant notes that the cited text teaches insert molding a display element 130 into the housing 20. The Applicant respectfully traverses these rejections on several grounds. First and foremost, the present application claims a method for forming an automotive dash instrument cluster. These are well known elements in automotive design. Deline, however, teaches a method of producing a rear-view mirror with warning lights. The two structures do not suffer similar structural characteristics and are therefore not comparable. The mirror is a relatively small element that is not prone to warpage in multi-layer processing. The automotive dash instruments displays utilized in automotive design, however, are large scale, flat plastic displays that are very much prone to warpage during multi-layer heat processing.

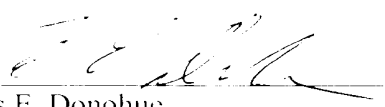
A second novel difference is the present invention claims forming a backplate 110 and a mask 112 as a single component using a first shot of injection molding. Deline neither teaches this nor renders it obvious. As a mask 112, a common and known component in instrument cluster design, is not even utilized in the Deline reference, it cannot and does not teach its formation as a single component with the backplate 110 using a first shot of injection molding. Nor does it teach forming the dial 114 by injection molding it directly onto the backplate 110 as claimed by the present invention. Instead the Deline reference teaches insert molding in the cited references. Deline teaches inserting the display element 130 and injection molding the housing 20 around it. This limits the choices of display elements 130 as they must withstand the heat of the housing formed around it. The present invention injection molds the dial directly onto the backplate (not taught by Deline). It is the unique mask/backplate single component that provides the resiliency to allow the dial 114 to be molded onto the backplate 110 without warpage. This is neither taught, nor rendered obvious by the Deline reference. Although one skilled in the art would recognize that Deline does not teach an instrument cluster as known in the art, the Applicant has respectfully amended the claims to prevent confusion. The Applicant respectfully requests reconsideration of the aforementioned claims and asserts they are presently in condition for allowance.

CONCLUSION

The Applicant would like to thank the Examiner for his assistance. In light of the above amendments and remarks, Applicant submits that all objections and rejections are now overcome. Applicant has added no new material to the application by these amendments. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited.

Should the Examiner have any questions or comments that would place the application in better condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Drawings

Figures 1 and 2 have been replaced.

In the Specification

The second full paragraph on page 5 has been replaced with the following:

Referring now to Figure 3, the instrument cluster 100 includes a backplate 110 and a mask 112. The backplate 110 and the mask 112 are formed as a single component using a shot of injection molding. By forming the backplate 110 and the mask 112 into a single component, the time and cost associated with manufacturing and assembly can be reduced. In addition, warranty concerns that can arise from attaching the backplate 110 to the mask 112 through the use of fasteners can be eliminated. In one embodiment, the backplate 110 and the mask 112 are comprised of ABS (acrylonitrile-butadiene-styrene), although a wide variety of materials may be used.

Claims 1-7 have been substituted with the following:

1. (Amended) An automotive dash instrument cluster comprising:
an injected molded backplate;
an injected molded mask, said injected molded mask and said injected molded backplate molded as a single component [using a first shot of injection molding] ; and
an injected molded dial molded directly [formed] onto said injected molded backplate [using a second shot of injection molding] .
2. (Amended) An automotive dash instrument cluster as described in claim 1, further comprising:
an applique.
3. (Amended) An automotive dash instrument cluster as described in claim 1, further comprising:
a lens.

4. (Amended) An automotive dash instrument cluster as described in claim 1, wherein said injected molded dial comprises clear polycarbonate.

5. (Amended) An automotive dash instrument cluster as described in claim 1, wherein said injected molded mask comprises [ABS] acrylonitrile-butadiene-styrene.

6. (Amended) An automotive dash instrument cluster as described in claim 1, wherein said injected molded backplate comprises [ABS] acrylonitrile-butadiene-styrene.

7. (Amended) An automotive dash instrument cluster as described in claim 1, further comprising:

light emitting diode backlighting.

Claims 8-14 have been cancelled.

Claims 15-18 have been substituted with the following:

15. (Amended) A method of producing an automotive dash instrument cluster comprising the steps of:

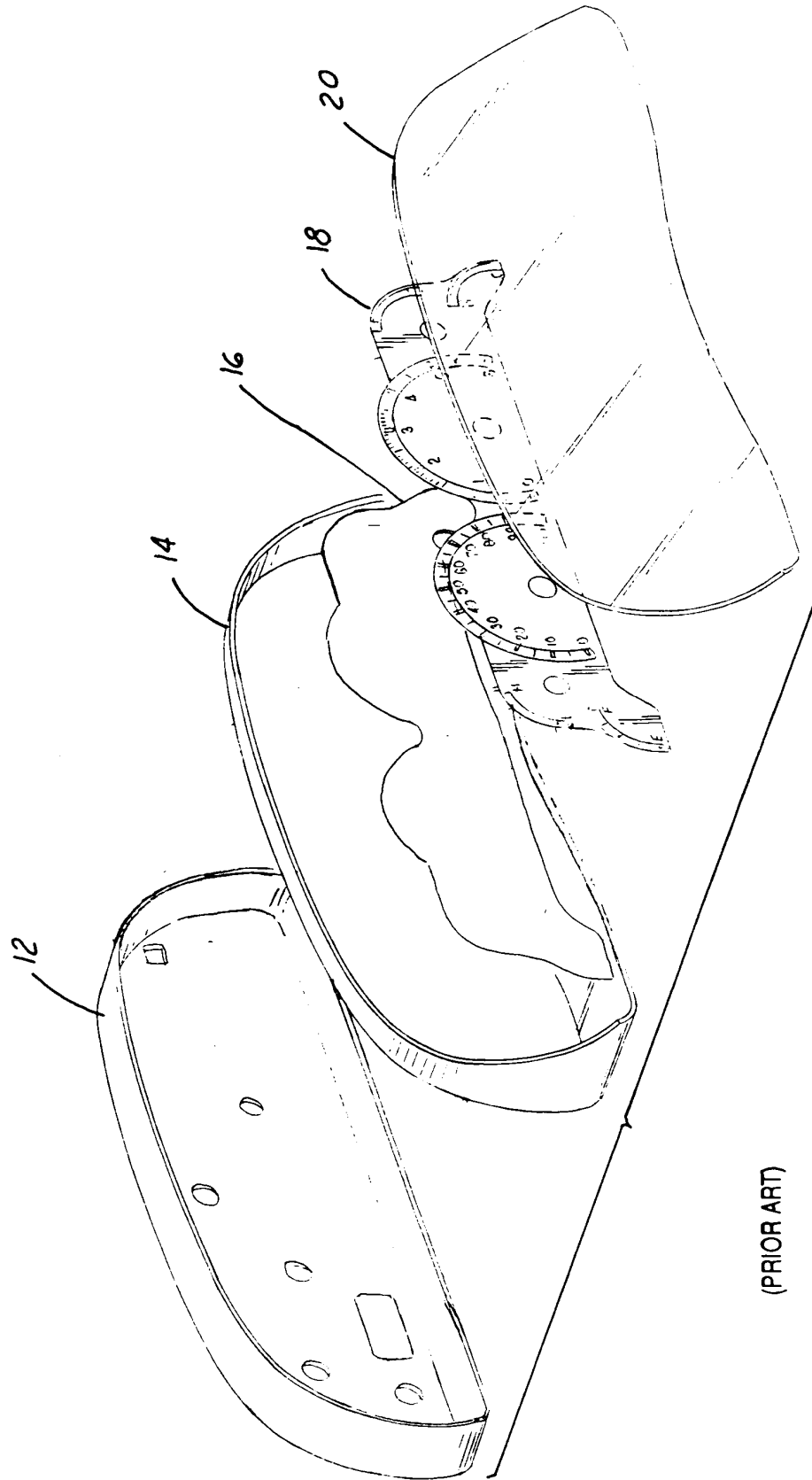
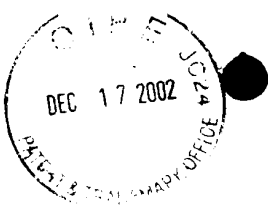
forming a backplate and a mask as a single component using a first shot of injection molding; and

forming a dial onto said backplate using a second shot of injection molding.

16. (Amended) A method of producing an automotive dash instrument cluster as described in claim 15, wherein said dial comprises clear polycarbonate.

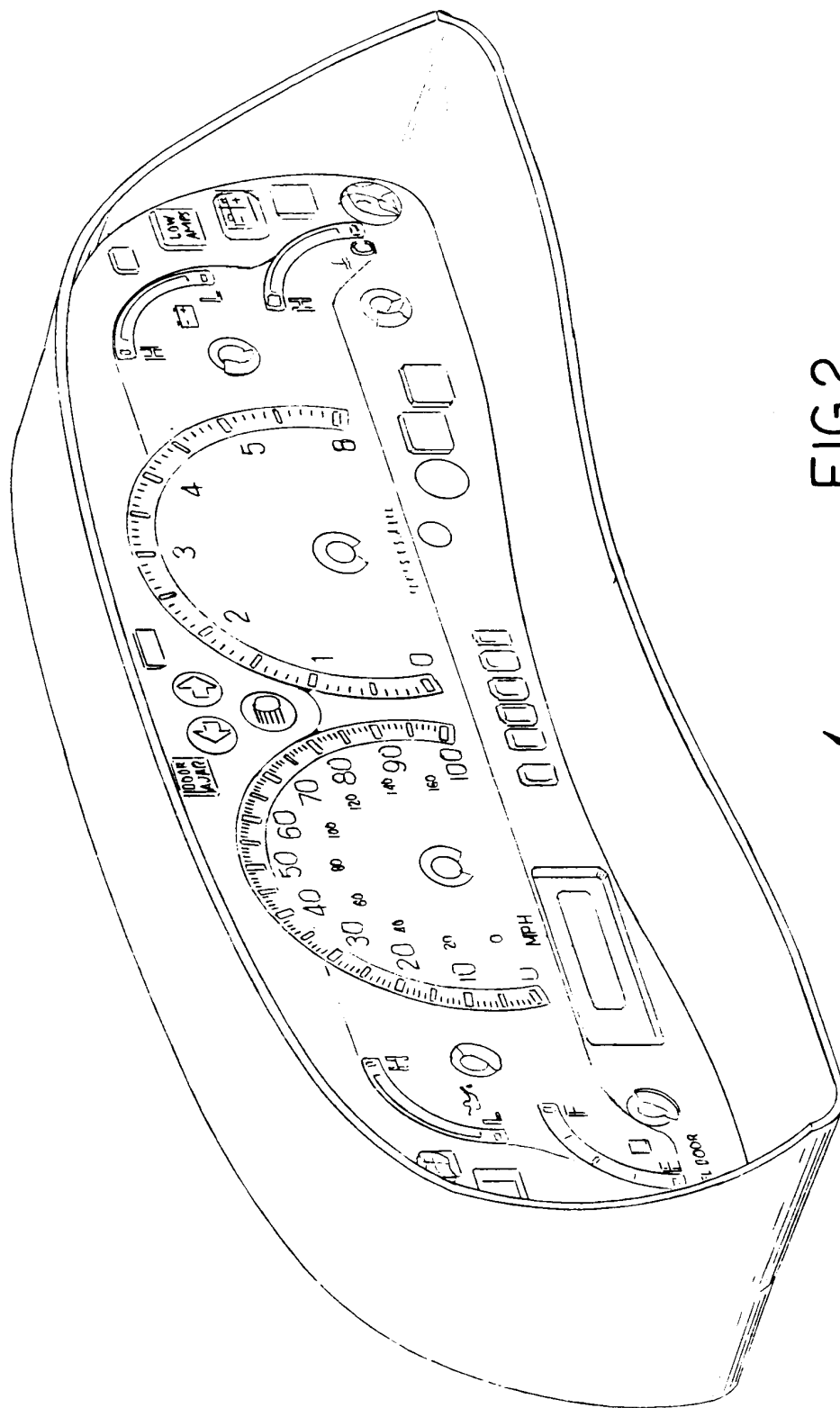
17. (Amended) A method of producing an automotive dash instrument cluster as described in claim 15, wherein said mask comprises [ABS] acrylonitrile-butadiene-styrene.

18. (Amended) A method of producing an automotive dash instrument cluster as described in claim 15, wherein said backplate comprises [ABS] acrylonitrile-butadiene-styrene.



(PRIOR ART)

FIG. 1



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